

1-18. (CANCELED)

19. (NEW) A multiple contact connector comprising:

a) at least one male plug (6) with each male plug (6) comprising an elongated and electrically insulated support (60) and having a number of electrically conductive contact zones (61), on at least one side thereof, along a longitudinal axis of the support (60);

b) a female socket (7) comprising an elongated and electrically insulated body (70) having at least one longitudinal and electrically insulated housing (71), on at least one side thereof, along a longitudinal axis of the body;

wherein the housing (71) further comprises a number of electrically conductive contact elements (72) positioned along a longitudinal axis of the housing;

c) the support (60) of the male plug (6) has a geometry which is complementary to that of the housing (71) of the female socket (7) allowing assembling with one another by nesting;

d) the contact zones (61) and the contact elements (72) face one another so that when the support (60) is nested with the housing (71), the contact zones (61) contact with the contact elements (72) and form electrical connections; and

e) a tightening device (8) for maintaining the support (60) in the housing (71) and exerting a radial pressure on the contact zones (61) into electrical engagement with the contact elements (72).

20. (NEW) The connector of claim 19, wherein the support (60) has at least two flat lateral surfaces (60a) while the body (70) comprises at least two lateral surfaces (71a) of the housing (71), and the flat lateral surfaces (60a) of the support (60) correspond geometrically to the lateral surfaces (71a) of the body (70).

21. (NEW) The connector of claim 19, wherein the support (60) has notches (62) in which the contact zones (61) are arranged, the notches (62) define radial walls (62') interposed between the contact zones (61) to electrically insulate the contact zones (61) from one another.

22. (NEW) The connector of claim 19, wherein the support (60) comprises a groove (63) for receiving a first cable section (4), which contains the contact zones (61).

23. (NEW) The connector of claim 19, wherein the body (70) of the female socket (7) has a first free end zone (70a), a second free end zone (70b) for coupling with a second cable section (5), and a middle zone (70c) including the housing (71), the



middle zone (70c) comprises radial walls (73') interposed along the longitudinal axis of the body (70) and electrically insulate the contact elements (72) from one another.

24. (NEW) The connector of claim 23, wherein the second end zone (70b) has a bore (75) for receiving an end of the second cable section (5), the middle zone (70c) has at least one circulation channel (76) parallel to an axis of the second cable section (5) for receiving electrical wires (5') of the cable section (5), the electrical wires (5') are electrically connected to the contact elements (72).

25. (NEW) The connector of claim 19, wherein each contact element (72) comprises a curved metallic spring blade, a first end of each contact element (72) projects into the housing (71) and a second end of each contact element (72) is mounted integrally in the body (70) by a connecting component (77).

26. (NEW) The connector of claim 25, wherein the connecting component (77) is a metallic rivet housed in a radial bore (74'), the radial bore (74') passes through an axial core (74) of the body (70).

27. (NEW) The connector of claim 25, wherein the connecting component (77) is a hollow wire guide for electrical wires (5').

28. (NEW) The connector of claim 26, wherein the axial core (74) of the body (70) has at least one flat part (71b) defining the bottom of the housing (71), on which a projecting end of the contact elements (72) and the contact zones (61) of male plug (6) are arranged.

29. (NEW) The connector of claim 24, wherein the body (70) has two diametrically opposed circulation channels (76) in which the electrical wires (5') of the second cable section (5) are distributed.

30. (NEW) The connector of claim 29, wherein the body (70) has first and second diametrically opposed housings (71) for receiving first and second male plugs (6) connected to first and second electrodes (2).

31. (NEW) The connector of claim 30, wherein the contact elements (72) of the two housings (71) alternate with respect to their positions.

32. (NEW) The connector of claim 23, wherein the tightening device (8) further comprises an electrically insulating tightening sleeve (80), the tightening sleeve (80) is mounted on the female socket (7) and is moveable along the longitudinal axis of the body (70), between an open position and a closed position, in the open position the tightening sleeve (80) releases the middle zone (70c) of the body (70) and allows



positioning of the support (60) of the male plug (6) in the corresponding housing (71), in the closed position the tightening sleeve (80) covers the middle zone (70c) and exerts a radial pressure on the support (60) in the housing (71) by pressing the contact zones (61) on the contact elements (72).

33. (NEW) A multiple contact connector comprising:

a) at least one male plug (6), with each male plug (6) comprising an elongated and electrically insulated support (60) and having a number of electrically conductive contact zones (61), on at least one side thereof, along the longitudinal axis of the support (60);

b) a female socket (7), comprising an elongated and electrically insulated body (70) having at least one longitudinal and electrically insulated housing (71), on at least one side thereof, along the longitudinal axis of the body,

the housing (71) further comprises a number of electrically conductive contact elements (72) positioned along the longitudinal axis of the housing; and

c) the support (60) of the male plug (6) has a geometry which is complementary to that of housing (71) of the female socket (7), allowing assembling with one another by nesting;

d) the contact zones (61) and the contact elements (72) face one another so that, when the support (60) is nested with the housing (71), the contact zones (61) contact with the contact elements (72) and form electrical connections.

34. (NEW) The connector of claim 33, wherein the connector further comprises a tightening device (8) for retaining the support (60) in the housing (71) and exerting a radial pressure of the contact zones (61) on the contact elements (72) to ensure electrical connections.

35. (NEW) The connector of claim 34, wherein the tightening device (8) further comprises an electrically insulating tightening sleeve (80), the tightening sleeve (80) mounted on the female socket (7) is moveable along the longitudinal axis of the body (70) between an open position and a closed position, in the open position the tightening sleeve (80) releases the housing (71) of the body (70) and allows positioning of the support (60) of the male plug (6) in the housing (71), in the closed position the tightening sleeve (80) covers the housing (71) and exerts a radial pressure on the



support (60) in the housing (71) by pressing the contact zones (61) on the contact elements (72).

36. (NEW) The connector according to claim 32, further comprising a stop device (81) on a second cable length (5) is positioned at a distance such that the stop device (81) delimits a stroke of the tightening sleeve (80) in open position.

37. (NEW) The connector according to claim 36, wherein a first end of the tightening sleeve (80) opposite the stop device (81) comprises an interior bevel (82) which cooperates with a corresponding bevel (64) on the support (60) of the male plug (6) when the tightening sleeve (80) passes from the open position to the closed position.

38. (NEW) The connector according to claim 24, further comprising an electrically insulating guard (9) between the body (70) and the tightening sleeve (80) and arranged to hide an opening of the circulation channel (76) made in the body (70).

39. (NEW) The connector according to claim 38, wherein the guard (9) consists of a half shell (90), the half shell (90) is positioned on the body (70) in the middle zone (70c) between the first and second free end zones (70a, 70b) of the body (70).

40. (NEW) The connector according to claim 39, wherein the body (70) and the tightening sleeve (80) are approximately cylindrical, an interior diameter of the tightening sleeve (80) is approximately equal to a sum of an exterior diameter of the middle zone (70c) of the body (70) and twice a thickness of the guard (9), a height of the support (60) of the male plug (6) is at most equal to a sum of a depth of the housing (71) and thickness of the guard (9).

41. (NEW) The connector according to claim 23, wherein the first free end zone (70a) of the body (70) comprises a slot (79) extending from the housing (71), the slot (79) receiving the first cable length (4) of the male plug (6).